

CLAIMS

What is claimed is:

1. An optical pickup apparatus comprising:
a light source which emits laser light;
a beam splitter which changes the travel path of incident light;
an objective lens which condenses light passed through the beam splitter to form a light spot on an optical recording medium; and
a photodetector which receives light reflected from the optical recording medium and then passed through the beam splitter to detect an information signal and an error signal,
wherein the optical pickup apparatus further comprises a grating which diffraction-transmits incident light, a wavelength plate which changes polarization characteristic of incident light, and an optical output compensating lens which compensates output of light incident from the light source, all of which being disposed on an optical path between the light source and the beam splitter,
wherein at least two of the grating, the wavelength plate, and the optical output compensating lens are formed in one body.
2. The optical pickup apparatus of claim 1, wherein the grating is formed on an optical incident surface and/or an optical emitting surface of the wavelength plate, so that the grating and the wavelength plate are formed in one body.
3. The optical pickup apparatus of claim 2, wherein the wavelength plate, which is formed in one body with the grating, is bonded to the optical output compensating lens.
4. The optical pickup apparatus of claim 1, wherein the grating is formed on an optical incident surface and/or an optical emitting surface of the optical output compensating lens, so that the grating and the optical output compensating lens are formed in one body.
5. The optical pickup apparatus of claim 1, wherein the wavelength plate and the optical output compensating lens are bonded to each other.

6. The optical pickup apparatus of claim 1, further comprising:
a holder in which the light source is fixed; and
a cylinder, in which at least two of the grating, the wavelength plate, and the optical output compensating lens are fixed and which is movable in an optical axis direction with respect to the holder and is installed rotatably,
wherein a position of the cylinder is adjustable in the optical axis direction and a rotation direction with respect to the holder.
7. The optical pickup apparatus of claim 1, wherein the grating is formed on an optical incident surface of the wavelength plate, so that the grating and the wavelength plate are formed in one body.
8. The optical pickup apparatus of claim 7, wherein the wavelength plate, which is formed in one body with the grating, is bonded to the optical output compensating lens.
9. The optical pickup apparatus of claim 1, wherein the grating is formed on an optical emitting surface of the wavelength plate, so that the grating and the wavelength plate are formed in one body.
10. The optical pickup apparatus of claim 9, wherein the wavelength plate, which is formed in one body with the grating, is bonded to the optical output compensating lens.
11. The optical pickup apparatus of claim 1, wherein the grating is formed on an optical incident surface of the optical output compensating lens, so that the grating and the optical output compensating lens are formed in one body.
12. The optical pickup apparatus of claim 1, wherein the grating is formed on an optical emitting surface of the optical output compensating lens, so that the grating and the optical output compensating lens are formed in one body.

13. The optical pickup apparatus of claim 2, further comprising:
a holder in which the light source is fixed; and
a cylinder, in which at least two of the grating, the wavelength plate, and the optical output compensating lens are fixed and which is movable in an optical axis direction with respect to the holder and can be installed rotatably,
wherein a position of the cylinder is adjustable in the optical axis direction and a rotation direction with respect to the holder.

14. The optical pickup apparatus of claim 3, further comprising:
a holder in which the light source is fixed; and
a cylinder, in which at least two of the grating, the wavelength plate, and the optical output compensating lens are fixed and which is movable in an optical axis direction with respect to the holder and can be installed rotatably,
wherein a position of the cylinder is adjustable in the optical axis direction and a rotation direction with respect to the holder.

15. The optical pickup apparatus of claim 4, further comprising:
a holder in which the light source is fixed; and
a cylinder, in which at least two of the grating, the wavelength plate, and the optical output compensating lens are fixed and which is movable in an optical axis direction with respect to the holder and can be installed rotatably,
wherein a position of the cylinder is adjustable in the optical axis direction and a rotation direction with respect to the holder.

16. The optical pickup apparatus of claim 5, further comprising:
a holder in which the light source is fixed; and
a cylinder, in which at least two of the grating, the wavelength plate, and the optical output compensating lens are fixed and which is movable in an optical axis direction with respect to the holder and can be installed rotatably,
wherein a position of the cylinder is adjustable in the optical axis direction and a rotation direction with respect to the holder.